

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled).
2. (Currently Amended) An isolated polynucleotide ~~molecule~~ according to Claim 27, said polynucleotide comprising a nucleotide sequence given in SEQ ID NO:1, ~~or a sequence showing at least 80% homology to said sequence.~~
- 3-4. (Cancelled).
5. (Currently Amended) The isolated polynucleotide according to Claim 29, which is comprised in plasmid ~~Plasmid~~ pSY42, deposited in *S. lividans* strain TK24/pSY42 with the deposition number DSM 12451.
6. (Currently Amended) The isolated polynucleotide according to Claim 29, which is comprised in plasmid ~~Plasmid~~ pSY43, deposited in *S. lividans* strain TK24/pSY43 with the deposition number DSM 12452.
- 7-11. (Cancelled)
12. (Currently Amended) A process for the production of ~~hybrid polyketides compounds,~~ comprising transferring at least one polynucleotide according to claim 27 into a host cell ~~selected from the group consisting of *snogJ*, *snogA*, *snoaM*, *snogN*, *snoaG*, *snogC*,~~

~~snogK, snoaL, snoK, snogD, snoW, snogE, snoL, snoO and snoaF~~ into a *Streptomyces* host, said polynucleotide being derived from the fragment of claim 1, to obtain a recombinant strain, cultivating the recombinant strain obtained, and isolating the polyketides compounds produced.

13. (Currently Amended) The process according to claim 12, wherein the polynucleotide is SEQ ID NO: 9 which is snoaL encoding NAME nogalonic acid methyl ester cyclase, and wherein the host is transferred into a Streptomyces host.

14. (Currently Amended) The process according to claim 12, wherein the polynucleotide is SEQ ID NO: 12 which is at least one of snogD and or SEQ ID NO: 14 which is snogE encoding glycosyl transferases, and wherein the host is transferred into a Streptomyces host.

15. (Currently Amended) The process according to claim 12, wherein at least one of *snogJ*, *snogN*, *snogC*, *snogK* and *snogA* affecting the formation of nogalamine and nogalose is transferred into a *Streptomyces* host.

16. (Currently Amended) A ~~recombinant~~ polynucleotide according to Claim 27, which ~~comprises the polynucleotide molecule according to claim 2,~~ is cloned in a plasmid capable of replicating in Streptomyces.

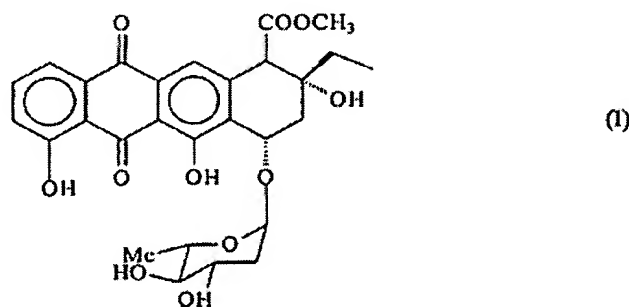
17. (Currently Amended) The ~~recombinant~~ polynucleotide according to claim 16, which is plasmid pSY15c, ~~comprising a 1.4 kb BamHI SacI fragment from plasmid pSY42 and a 1.1 kb MluI KpnI fragment from plasmid pSY43.~~

18. (Currently Amended) A process for the production of ~~hybrid~~ polyketides ~~compounds~~, comprising transferring the polynucleotide molecule according to claim 2 into a *Streptomyces* host to obtain a recombinant strain, cultivating the recombinant strain obtained, and isolating the ~~compounds~~ polyketides produced.

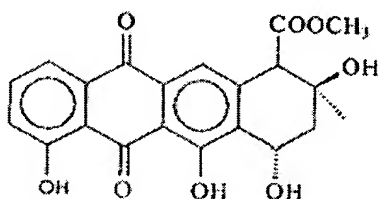
19. (Previously Presented) The process according to claim 18, wherein the *Streptomyces* host is a *Streptomyces galilaeus* host.

20. (Currently Amended) The process according to claim 19, wherein the *Streptomyces galilaeus* host is selected from strains consisting of H026, H039, H063 and H075, ~~which are mutant strains of *S. galilaeus* ATCC 31615.~~

21. (Currently Amended) The process according to claim 19, wherein an anthracycline of formula I is produced; ~~which has the following formula I~~



22. (Currently Amended) The process according to claim ~~18~~ 19, wherein an anthracyclinone of formula II is produced; ~~which has the following formula II~~



(II)

23-26. (Cancelled).

27. (New) An isolated polynucleotide, wherein the polynucleotide remains hybridized with a nucleic acid molecule that encodes an amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 or 18, at 70 °C according to Boehringer Mannheim's manual "DIG System User's Guide for Filter Hybridization."

28. (New) An isolated polynucleotide according to Claim 27, wherein the polypeptide molecule comprises the sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 or 18.

29. (New) An isolated polynucleotide according to claim 27, wherein the polynucleotide is comprised in plasmid pSY42 deposited in *S. lividans* strain TK24/pSY42 with a deposition number DSM 12451, or in plasmid pSY43, deposited in *S. lividans* strain TK24/pSY43 with a deposition number DSM 12452.